



935395

IND 11-13

Facility name: MOBILE OIL CORP.

Location: 3821 INDIANAPOLIS BLVD, E CHGO., IL 46327

EPA Region: 05

Person(s) in charge of the facility: _____

Name of Reviewer: LARRY LUNEH Date: 01-23-86

General description of the facility:
(For example: landfill, surface impoundment pile container, types of hazardous substances, location of the facility; contamination route of major concern; types of information needed for rating, agency action, etc.)

THIS SITE IN THE INDUSTRIAL PARK OF
N.E. INDIANA. IT WOULD BE EXTREMELY
DIFFICULT TO ATTRIBUTE POLLUTION TO
SPECIFIC SITES EVEN THOUGH PROBLEMS
EXIST. BOTH SURFACE & GROUNDWATER
POLLUTION IS POSSIBLE.

Scores: $S_M =$ ($S_{gw} =$ $S_{sw} =$ $S_a =$)

$S_{FE} =$

$S_{DC} =$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 45	1	(45)	45	3.1
If observed release is given a score of 45, proceed to line 4 If observed release is given a score of 0, proceed to line 2 .					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 (1) 2 3	2		6	
Net Precipitation	0 1 (2) 3	1		3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1		3	
Physical State	0 1 2 (3)	1		3	
Total Route Characteristics Score				15	(9)
3 Containment	0 1 (2) 3	1		3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 (6) 7 8	1	6	8	
Total Waste Characteristics Score			(24)	26	(24)
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	0 4 (6) 8 10 12 16 18 20 24 30 32 35 40	1	6	40	
Total Targets Score			(6)	49	(6)
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			6480	57,330	2592
7 Divide line 6 by 57,330 and multiply by 100			S _{gw} = 11.30		4.52

**FIGURE 2
GROUND WATER ROUTE WORK SHEET**

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 45	1	(45)	45	4.1
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1		3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1		3	
Distance to Nearest Surface Water	0 1 2 (3)	2		6	
Physical State	0 1 2 (3)	1		3	
Total Route Characteristics Score				15	(11)
3 Containment	0 1 (2) 3	1		3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 (6) 7 8	1	6	8	
Total Waste Characteristics Score				(24)	26
5 Targets					4.5
Surface Water Use	0 1 2 (3)	3	9	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0*	40	
Total Targets Score				(9)	55
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			9720	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S _{sw} = 15.10		

**FIGURE 7
SURFACE WATER ROUTE WORK SHEET**

* See Reverse side of sheet.

	S		S ²	
	OR	NR	w/R	OR
Groundwater Route Score (S _{gw})	4.52	11.30	20.43	127.69
Surface Water Route Score (S _{sw})	7.38	15.10	54.46	228.01
Air Route Score (S _a)	0	67	0	4582
$S_{gw}^2 + S_{sw}^2 + S_a^2$			74.88	4938.10
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$			8.65	180.827
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M$			5.00	40.80

FIGURE 10
WORKSHEET FOR COMPUTING S_M

40.6 w/air
release

Facility name Mobil Oil Corp.

INO111-06

Location 3821 Indianapolis Blvd. E. Chicago, IN

EPA Region I

Person(s) in charge of the facility James Co Co (219) 397-1950

3821 Indianapolis Blvd

E. Chicago, IN

Name of Reviewer: Richard Dagnall (FIT) Date 11/19/86

General description of the facility:

(For example: landfill, surface impoundment, pile, container, types of hazardous substances, location of the facility, contamination route of major concern; types of information needed for testing, agency action, etc.)

Refinery sludges from past operations were
placed in dewatering pits. The sludges were
then placed in on-site landfills. The sludges
contain high levels of heavy metals. Due to
the sites location, there is no real route
of concern.

Scores: $S_M = 1.53$ ($S_{gw} = 2.64$ $S_{sw} = 0.00$ $S_a = 0.00$)

$S_{FE} = 0.00$

$S_{DC} = 0.00$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Rel. (Section)	
1 Observed Release	0 45	1	0	45	3.1	
If observed release is given a score of 45, proceed to line 2 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 3	2	2	6		
Net Precipitation	0 1 2 3	1	2	3		
Permeability of the Unsaturated Zone	0 1 2 3	1	0	3		
Physical State	0 1 2 3	1	3	3		
Total Route Characteristics Score			7	15		
3 Containment	0 1 2 3	1	3	3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 15 18	1	18	18		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1	6	8		
Total Waste Characteristics Score			24	26		
5 Targets					3.5	
Ground Water Use	0 1 2 3	3	3	9		
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40		
Total Targets Score			3	49		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			1512	57,330		
7 Divide line 6 by 57,330 and multiply by 100			S _{gw} = 2.64			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi- plier	Score	Max. Score	Rel. (Section)
1 Observed Release	0	45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4 If observed release is given a value of 0, proceed to line 2						
2 Route Characteristics						4.2
Facility Slope and Intervening Terrain	0	1	2	3	1	3
1-yr. 24-hr. Rainfall	0	1	2	3	1	3
Distance to Nearest Surface Water	0	1	2	3	2	6
Physical State	0	1	2	3	1	3
Total Route Characteristics Score				0	15	
3 Containment	0	1	2	3	1	3
4 Waste Characteristics						4.4
Toxicity/Persistence	0	3	6	9	12	15
Hazardous Waste Quantity	0	1	2	3	4	5
Total Waste Characteristics Score				0	28	
5 Targets						4.5
Surface Water Use	0	1	2	3	3	9
Distance to a Sensitive Environment	0	1	2	3	2	6
Population Served/Distance to Water Intake Downstream	0	4	6	8	10	1
	12	16	18	20		40
	24	30	32	35	40	
Total Targets Score				0	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				0.00	64.350	
7 Divide line 6 by 64.350 and multiply by 100				S _{SW} = 0.00		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max Score	Ref. (Section)	
1 Observed Release	0 45	1	0	45	5.1	
Date and Location						
Sampling Protocol						
If line 1 is 0, the $S_a = 0$. Enter on line 5 If line 1 is 45, then proceed to line 2						
2 Waste Characteristics					5.2	
Reactivity and Incompatibility	0 1 2 3	1		3		
Toxicity	0 1 2 3	3		9		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score			0	20		
3 Targets					5.3	
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30		
Distance to Sensitive Environment	0 1 2 3	2		6		
Land Use	0 1 2 3	1		3		
Total Targets Score			0	39		
4 Multiply 1 x 2 x 3			0.00	35,100		
5 Divide line 4 by 35,100 and multiply by 100			$S_a = 0.00$			

FIGURE 9
AIR ROUTE WORK SHEET

FIGURE 10
WORKSHEET FOR COMPUTING C

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi- plier	Score	Max. Score	Ref. (Section)
1 Containment	1	3	1	N/A	3	7.1
2 Waste Characteristics						7.2
Direct Evidence	0	3	1		3	
Ignitability	0	1 2 3	1		3	
Reactivity	0	1 2 3	1		3	
Incompatibility	0	1 2 3	1		3	
Hazardous Waste Quantity	0	1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				0	20	
3 Targets						7.3
Distance to Nearest Population	0	1 2 3 4 5	1		5	
Distance to Nearest Building	0	1 2 3	1		3	
Distance to Sensitive Environment	0	1 2 3	1		3	
Land Use	0	1 2 3	1		3	
Population Within 2-Mile Radius	0	1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0	1 2 3 4 5	1		5	
Total Targets Score				0	24	
4 Multiply 1 x 2 x 3				0.00	1,440	
5 Divide line 4 by 1,440 and multiply by 100				SFE = 0.00		

**FIGURE 11
FIRE AND EXPLOSION WORK SHEET**

Direct Contact Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max Score	Ref. (Section)	
1 Observed Incident	0 45	1	0.00	45	8.1	
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2						
2 Accessibility	0 1 2 3	1	0.00	3	8.2	
3 Containment	0 15	1	0.00	15	8.3	
4 Waste Characteristics Toxicity	0 1 2 3	5	0.00	15	8.4	
5 Targets					8.5	
Population Within a 1-Mile Radius	0 1 2 3 4 5	4		20		
Distance to a Critical Habitat	0 1 2 3	4		12		
Total Targets Score			0.00	32		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0.00	21,600		
7 Divide line 6 by 21,600 and multiply by 100			SDC = 0.00			

FIGURE 12
DIRECT CONTACT WORK SHEET

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Mobil Oil Corp.

LOCATION: 3821 Indianapolis Blvd E. Chicago, IN

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

None

Rationale for attributing the contaminants to the facility:

N/A

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

There are three aquifers in Lake County. The aquifers are separated by two continuous confining layers [Ref #2, p.1]. The one well within 3 miles of the site uses the bedrock aquifer [Ref #3, p.2]. This aquifer is in dolomite of the Silurian Age [Ref #2, p.1] and is about 100 feet thick [Ref #2, p.10]. While the confining layer does leak, it is of a significantly lower permeability than the aquifers it separates, and is considered a confining layer. Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

The bedrock is encountered at 107 ft. at the site [Ref #2, map].

$$\frac{2}{6} = \frac{x}{20} \quad x = 6.66 \text{ ft} \quad 100 + 7 = 107$$

Depth from the ground surface to the lowest point of waste disposal/storage:

The sludge pits were 20 ft. deep [Ref #4, p.1].

Score=1 [Ref #1, 47 FR 31224]

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

36 inches [Ref #1, 47FR 31224]
mean annual value

Mean annual lake or seasonal evaporation (list months for seasonal):

30 inches [Ref #1, 47FR 31224]
mean annual value

Net precipitation (subtract the above figures):

6 inches [Score = 2] [Ref #1, 47FR 31224]

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

clay till [Ref. #2, p. 1]

Permeability associated with soil type:

clay till $< 10^{-7}$ cm/sec [Score = 0]
[Ref. #1, 47FR 31224]

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Sludge [Ref #4, p. 2].

[Score = 3] [Ref #1, 47FR 31229]

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

The waste was contained in unlined lagoons and placed in an unlined landfill [Ref #4, p. 2-3].

Method with highest score:

Unlined lagoon

Score = 3 [Ref #1, 47 FR 31224]

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:	Toxicity [Ref #5]	Persistence [Ref #1, 47 FR 31229]	Score
Arsenic [Ref #12, p 6-8]	3 p 316	3	18
Lead [Ref #12, p 6-8]	3 p. 1684	3	18
Toluene [Ref #13, p 17, 21, 25]	2 p. 2588	1	9

Compound with highest score:

Lead

Score = 18 [Ref #1, 47 FR 31229]

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

$$38,000 \text{ cu. ft.} \div 27 \frac{\text{cu. ft.}}{\text{cu. yd.}} = 1,407 \text{ cu. yd.}$$

[Ref #6]

Score = 6 [Ref #1, 47 FR 31229]

Basis of estimating and/or computing waste quantity:

103(c) form completed by company representatives.
[Ref #6].

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

The only well, that can be shown to still be in use, is used for industrial purposes only [Ref #3, p.1].

Score = 1 [Ref #1, 4731230]

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

The only well still in use is located at

Thatcher Engineering Corp
7100 Industrial Highway
Gary, Indiana

[Ref. #3]

Distance to above well or building:

2.8 miles

[Ref #7]

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

There are no known drinking water wells found within 3 miles of the site. The entire area is served by surface water [Ref. #8, p. 95][Ref #9].

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

The area within the 3-mile radius is completely urbanized. There is no irrigation in this area [Ref. #7].

Total population served by ground water within a 3-mile radius:

zero

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

The landfills are covered and do not extend above ground level.
The slope of the landfills are 0% and preclude runoff [Ref #10].
This results in a containment score of zero [Ref #1, 47 FR 31236].
The surface impoundments have adequate freeboard [Ref #10].
This gives them a containment value of zero [Ref #1, 47 FR 31236].
The entire site is bermed [Ref #10] also precluding a surface route [Ref #1, 47 FR 31236].
Rationale for attributing the contaminants to the facility:

N/A

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

N/A

Name/description of nearest downslope surface water:

N/A

Average slope of terrain between facility and above-cited surface water body in percent:

N/A

Is the facility located either totally or partially in surface water?

N/A

Is the facility completely surrounded by areas of higher elevation?

N/A

1-Year 24-Hour Rainfall in Inches

N/A

Distance to Nearest Downslope Surface Water

N/A

Physical State of Waste

N/A

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

N/A

Method with highest score:

N/A

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

N/A

Compound with highest score:

N/A

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

N/A

Basis of estimating and/or computing waste quantity:

N/A

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

N/A

Is there tidal influence?

N/A

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile-or less:

N/A

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

N/A

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

N/A

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

N/A

Total population served:

N/A

Name/description of nearest of above water bodies:

N/A

Distance to above-cited intakes, measured in stream miles.

N/A

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

There is no documented air release from the site.

Date and location of detection of contaminants

N/A

Methods used to detect the contaminants:

N/A

Rationale for attributing the contaminants to the site:

N/A

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

N/A

Most incompatible pair of compounds:

N/A

Toxicity

Most toxic compound:

N/A

Hazardous Waste Quantity

Total quantity of hazardous waste:

N/A

Basis of estimating and/or computing waste quantity:

N/A

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi

0 to 1 mi

0 to 1/2 mi

0 to 1/4 mi

N/A

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

N/A

Distance to critical habitat of an endangered species, if 1 mile or less:

N/A

Land Use

Distance to commercial/industrial area, if 1 mile or less:

N/A

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

N/A

Distance to residential area, if 2 miles or less:

N/A

Distance to agricultural land in production within past 5 years, if 1 mile or less:

N/A

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

N/A

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

N/A

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

There is no imminent hazard posed by the site [Ref #11].

Type of containment, if applicable:

N/A

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

N/A

Ignitability

Compound used:

N/A

Reactivity

Most reactive compound:

N/A

Incompatibility

Most incompatible pair of compounds:

N/A

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

N/A

Basis of estimating and/or computing waste quantity:

N/A

3 TARGETS

Distance to Nearest Population

N/A

Distance to Nearest Building

N/A

Distance to Sensitive Environment

Distance to wetlands:

N/A

Distance to critical habitat:

N/A

Land Use

Distance to commercial/industrial area, if 1 mile or less:

N/A

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

N/A

Distance to residential area, if 2 miles or less:

N/A

Distance to agricultural land in production within past 5 years, if 1 mile or less:

N/A

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

N/A

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

N/A

Population Within 2-Mile Radius

N/A

Buildings Within 2-Mile Radius

N/A

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

None

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

The site is completely enclosed by a 6 foot high fence topped with barbed wire [Ref #4 p.3]

* * *

3 CONTAINMENT

Type of containment, if applicable:

N/A

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

N/A

Compound with highest score:

N/A

* * *

5 TARGETS

Population within one-mile radius

N/A

Distance to critical habitat (of endangered species)

N/A

HRS DOCUMENTATION LOG SHEET

SITE NAME Mobil Oil CorpCITY E. ChicagoSTATE INIDENTIFICATION NUMBER IND 042329631

REFERENCE NUMBER	DESCRIPTION OF THE REFERENCE
1.	Federal Register, July 16, 1982
2.	Indiana DNR, Division of Water - Bulletin No. 31, Geohydrology and Ground Water Potential of Lake County 1968 6pp
3.	Letter from Gerald P. Egan, Thatcher Engineering Corp., to Mark Lunsford, E&E, June 11, 1985 4pp
4.	Cover memo to SI Report from Larry Lumeh, E&E, to File October 27, 1986 (Revised) 3pp
5	Sax, I. J. Dangerous Properties of Industrial Materials, 6 th ed 1984
6.	103(c) Form Notification of Hazardous Waste 6/8/81 completed by Gerald Sweet, terminal Superintendent 2pp
7.	U.S.G.S topographic map 7.5 min series Lake Calumet, Whiting, Calumet City, and Highland Quads 1980

HRS DOCUMENTATION LOG SHEET

SITE NAME Mobil Oil CorpCITY E. ChicagoSTATE INIDENTIFICATION NUMBER IND 042329631

REFERENCE NUMBER	DESCRIPTION OF THE REFERENCE
1.	Federal Register, July 16, 1982
2.	Indiana DNR, Division of Water - Bulletin No. 31, Geohydrology and Ground Water Potential of Lake County 1968 6pp
3.	Letter from Gerald P. Egan, Thatcher Engineering Corp., to Mark Lunsford, E&E, June 11, 1985 4pp
4.	Cover memo to SI Report from Larry Lumeh, E&E, to File October 27, 1986 (Revised) 3pp
5	Sax, I. J. Dangerous Properties of Industrial Materials, 6 th ed 1984
6.	103(c) Form Notification of Hazardous Waste 6/8/81 completed by Gerald Sweet, terminal Superintendent 2pp
7.	U.S.G.S topographic map 7.5 min series Lake Calumet, Whiting, Calumet City, and Highland Quads 1980

HRS DOCUMENTATION LOG SHEET

SITE NAME Mobile Oil Corp
 CITY E. Chicago STATE IN
 IDENTIFICATION NUMBER IND042329631

REFERENCE NUMBER	DESCRIPTION OF THE REFERENCE
8	The 1981 Survey of Public Water Supply Service Areas in Indiana 3 pp
9.	Data on Indiana Public Water Supplies Revised 1984 Indiana State Board of Health 5 pp
10.	Memo to File From Larry Lumeh, of E+E, 10/30/86 Subject: Surface Water Route 1 p
11.	Phone Log: Richard Dagnall, of E+E, called Inspector Ricciardi, of E. Chicago, at 2:40 pm on 10/30/86 (219) 397-2780 1 p
12	Analytical Results, samples taken by FIT April 14, 1986 Analysed by Rocky Mountain Analytical 13 pp inorganic soils
13	Analytical Results, samples taken by FIT April 14, 1986 Analysed by Analytical Resources Inc 33 pp organic soils

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